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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/399,678	09/21/1999	DUANE L. ABBEY	98CR023/KE	2540

7590 09/06/2005

ATTENTION: KYLE EPPELE
ROCKWELL COLLINS INC
400 COLLINS RD NE
CEDAR RAPIDS, IA 52498

EXAMINER

CORRIELUS, JEAN B

ART UNIT	PAPER NUMBER
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2637

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/399,678

Applicant(s)

ABBEY, DUANE L.

Examiner

Jean B. Corielus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26,29-32 and 34 is/are pending in the application.
- 4a) Of the above claim(s) 1-12,26,29-32 and 34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

Claims 1-12, 26, 29-30, 32 and 34 are directly related to fig. 7.

Claims 13-25 are directly related to figs. 14 and 20.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, there are no generic claims in the present application.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record

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showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with Nathan O. Jensen on 8/22/05 a provisional election was made without traverse to prosecute the invention of species II, claims 13-25. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-12, 26, 29-30, 32 and 34 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 13-25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The term "recursive", recited in claim 13, introduced in the response filed on 10/29/03, is not supported by the original disclosure. The same comment applies to claims 15, 20, 21 and to each dependent claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rahman et al US Patent No. 6,470,365.

As per claim 13, Rahman discloses a predecimated integrator filter section fig. 4 comprising a data rate change component 72 a first integrator structure 73 comprising M-L recursive integrator stages; said first integrator structure 73 receiving data at a rate established by said data rate change component 72, said first integrator structure 73 inherently modifying data received from said data rate change component 72. Note that the limitation "post decimated integrator filter section having an equal number of integrator stages" does not carry any patentable weight because the claimed invention, following the "wherein" clause, is not directed to "a post decimation filter". However, for the of argument, note that configuring the predecimation filter in such a way to output data equivalent to data that would be output by a post decimated integrator filter section having an equal number of integrator stages would have been obvious to one skill in the art as most signal processing is carried out using a digital signal processor that can be programmed to generate a desired output signal i.e. "output data equivalent to data that would be output by a post decimated integrator filter section having an equal number of integrator stages" in order to provide a user with the flexibility to use either post or pre-decimation type filter as required by a particular application.

As per claim 14, Note that ahman further discloses a second integrator structure 71 having L integrator stages.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rahman et al US Patent No. 6,470,365 in view of Kub et al US Patent No. 5,781,063.

As applied to claim 13 above, Rahman et al discloses every feature of the claimed invention but does not explicitly teach first integrator structure comprising a plurality of multipliers. Kub et al discloses a plurality of multipliers as part of an integrator structure see fig. 5. Given that fact, it would have been obvious to one skill in the art to incorporate such a teaching in Rahman in order to enhance signal processing.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rahman et al US Patent No. 6,470,365 in view of Sasaki et al, US Patent No. 5,570,379.

As applied to claim 13 above, Rahman et al discloses every feature of the claimed invention but does not explicitly teach the data rate comprises a S/P converter. Sasaki et al teaches a rate converter 114 comprising a S/P converter see col. 6, lines 14-16. Given that fact, it would have been obvious to one skill in the art to implement the rate changer as a S/P converter as suggested by Sasaki et al as S/P converters are easy to implement.

Allowable Subject Matter

8. The indicated allowability of claims 13-25 has is withdrawn in view of the newly discovered reference(s) to Rahman et al US Patent No. 6,470,365, Kub et al, US Patent

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No. 5,781,063 and Sasaki et al US Patent No. 5,570,379 and the above 112 first paragraph rejection. Rejections based on the newly cited reference(s) and the 112 first paragraph rejection are set forth above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Maxi-Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jean B Corrielus
Primary Examiner
Art Unit 2637 9/2/05